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ABSTRACT OF THE DISCLOSURE

A prefabricated structural building panel having a deep ribbed sheet metal interior skin. The panel preferably has a light weight rigid highly insulative foam core bonded to inner and outer skins, and having a ribbed configuration for the interior skin. A method for building a structural wall by assembling panels in an edge to edge relationship to create a structural wall system with the ribbed interior skin providing the structural support. A prefabricated insulated structural panel, having a core material of various types of foam plastic bonded to an interior ribbed metal skin and an exterior skin of any one or combination of suitable exterior materials such as for example wood, fiber glass, cement, or metal. The edges of the panels are configured to abuttingly match corresponding edges of similarly configured panels when such panels are arranged in edge to edge relationship to form the structure wall of a building. The interior ribbed metal skin, when bonded to a foam core, the foam core being continuous and completely within the cavities or the valleys of the ribbed panel, and an outer skin bonded to the outer surface of the foam core, all combine to form a structural panel in which the ribbed interior skin will support substantially the entire axial load and the composite panel will support all the live or wind load to which it would be subjected.

TO 2050 " 847657 " 010201